

**WEST AFRICA COTTON IMPROVEMENT PROGRAM PLANNING
WORKSHOP**

Cotonou, Benin, January 25 – 26, 2006

WORKSHOP REPORT

February 2006

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ACRONYMS

AIC	<i>Association Interprofessionnelle du Coton</i> (Inter-professional Cotton Association, Benin)
APCs	<i>Associations des Producteurs de Coton</i> (Cotton Producer Associations, Mali)
APEB	<i>Association Privée des Grands du Bénin</i> (Association of Private Ginners of Benin)
Bt	<i>Bacillus thuringiensis</i>
C-4	Cotton producing countries: Bénin, Burkina Faso, Tchad and Mali
CAGIA	<i>Coopérative d'Approvisionnement et de Gestion en Intrants Agricoles</i> (Cooperative for the Supply and Management of Agricultural Inputs, Bénin)
CERFITEX	<i>Centre de recherche et de formation pour l'industrie textile</i> (Center for Research and Training for Industrial Textiles)
CILSS	<i>Comité Permanent Inter-États de Lutte contre la Sécheresse dans le Sahel</i> (Permanent Interstate Committee for Drought Control in the Sahel)
CMDT	<i>Compagnie Malienne de Développement Textile</i> (Malian Textile Development Company)
CORAF	<i>Conseil Ouest et Centre Africain pour la Recherche et le Développement Agricoles</i> (West and Central African Council for Agricultural Research and Development, WECARD)
CSPR	<i>Centrale de Sécurisation des Paiements et du Recouvrement</i> (Center for Securitization of Payments and Recovery, Benin)
ECOWAS	Economic Commission of West African States (CEDEAO)
EPA	Environmental Protection Agency (United States)
EU	European Union
FUPRO	<i>Fédération des Unions de Producteurs du Bénin</i> (Federation of Producers' Unions of Benin)
GMOs	Genetically modified organisms
GPCs	<i>Groupements de Producteurs de Coton</i> (Cotton Producer Groups, Burkina)
GPDI	<i>Groupement Professionnel des Distributeurs des Intrants Agricoles</i> (Professional Group of Agricultural Input Distributors, Benin)
GV	<i>Groupements Villageois</i> (Village Groups, Benin)
IFDC	International Fertilizer Development Center
INSAH	<i>Institut du Sahel</i> (Sahel Institute)
IPM	Integrated pest management
MT	Metric ton
NCC	National Cotton Council of America
NGO	Non-governmental organization
OPP	<i>Organisations de Producteurs Paysans</i> (Peasant Producer Organizations)
OSHA	Occupational Safety and Health Administration
ROPFA	<i>Reseau des Paysans et Producteurs de l'Afrique de l'Ouest</i> (Network of Farmers and Producers of West Africa)
SNRA	Système National de Recherche Agricole
SOTEXKA	Société de Textile de Kaolack
USAID	United States Agency for International Development
WARP	USAID West Africa Regional Program
USDA	United States Department of Agriculture

USDA/FAS	United States Department of Agriculture/Foreign Agricultural Service
USG	United States Government
WACIP	West Africa Cotton Improvement Program
WAEMU	West African Economic and Monetary Union (UEMOA)
WB	World Bank (Banque Mondiale)
WTO	World Trade Organization

1. BACKGROUND

1.1 United States Government Commitment

Cotton is critical to the development of Benin, Burkina Faso, Chad, and Mali, (referred to as the C-4 countries). It is one of the main drivers of economic growth, employment, and incomes. Cotton is the main economic activity for more than one million households in the C-4 countries, while providing livelihoods for more than 10 million farmers.

The United States has strong political, economic, and humanitarian interests in supporting higher agricultural growth in Africa. Reducing hunger and poverty in Africa is of key strategic importance to Africa and the United States. Widespread hunger and poverty will increase the likelihood of political instability and costly conflict across the continent. Given its importance in the economies of C-4 countries, improving the productivity and quality of cotton can increase incomes, generate employment, and stimulate economic growth. These in turn have the potential to reduce hunger and poverty.

During the World Trade Organization (WTO) meeting in Cotonou, Benin on March 24-25, 2004, the United States Government (USG) made a commitment to support efforts of African countries, particularly the C-4 nations, to increase cotton productivity and to help them profitably participate in world trade.

As a follow-up to the USG's engagement at the above-mentioned WTO meeting, the United States Agency for International Development (USAID), in cooperation with the U.S. Department of Agriculture (USDA), carried out an assessment of the cotton sector in Benin, Burkina Faso, Chad and Mali, and also met with officials in Senegal in September-October 2004. (Senegal was included in the assessment, given the potential of its textile industry being a potential market for C-4 cotton.) The objective of this assessment was to establish a clear understanding on the part of the USG of the current state of cotton production, transformation and consumption in the C-4 countries. The assessment provides the conceptual and technical foundation for a possible USG-supported program for the development of the C-4 countries' cotton sector, which is consistent with USG commitments made during the WTO negotiations.

1.2 The WACIP Program

Following the cotton assessment, the USAID developed the framework of the West Africa Cotton Improvement Program (WACIP). It will cover a three-year period and will provide support to the C-4 countries and Senegal, covering three main thematic areas:

- increase in productivity;
- policy and institutional issues;
- processing and marketing.

The USAID identified seven of the fifteen areas of intervention, recommended by the assessment study, as key components for support. Specific areas of work will include assistance in agricultural policy, agriculture research coordination, biotechnology and biosafety, strengthening farmer organizations, and strengthening market information systems.

Given the need for consultation before developing the implementation plan for WACIP, USAID organized a workshop on January 25 and 26, 2006 that brought together some high-level USAID and embassy representatives, technical government officials from the Ministries of Agriculture and Commerce in the C-4 countries plus Senegal, and representatives from selected regional institutions and organizations involved in cotton in West Africa.

1.3 Objectives and Outcomes of Workshop

The objectives of the meeting were to:

- share information regarding constraints and opportunities in the C-4 countries;
- identify possible areas of intervention by WACIP;
- obtain ideas for the implementation of the program.

The outcomes of the workshop were to:

1. Obtain input from senior technical leaders from West Africa on the proposed United States Government (USG)-sponsored West Africa Cotton Improvement Program (WACIP).
2. Identify regional- and country-specific priorities that will be addressed by WACIP.
3. Identify activities that can be implemented within the next six months.
4. Reach consensus on an advisory committee structure for WACIP.
5. Identify the next steps after the workshop.
6. Produce a written communiqué on the results of the workshop.

1.4 Workshop Agenda and Participation

The Agenda for the two-day workshop and the list of participants are shown in Annex A and B respectively. Presentations were made by the USAID on the design of WACIP, by institutions and organizations from both the US and West Africa on their programs related to cotton. Three Working Groups identified possible activities for implementation, which were later discussed in plenary.

2. PRESENTATIONS AND DISCUSSIONS

2.1 Opening Remarks

Mr. Randolph Thomas, Director, USAID, Benin opened the meeting pointing out the United States' awareness of the importance of the role of cotton in the life of West African producers and its commitment to supporting the development of the cotton sector in the C-4 countries. He urged participants to work with the USAID to develop an effective program, which will have a positive impact.

Dr. Daniel Eklou, Director, Agriculture, Rural Development and Environment, of ECOWAS, thanked the US for the WACIP initiative and remarked that the concerns of African countries have not been taken into account in international fora. He stressed the need to also look at diversification of agricultural products.

Further details of these two opening remarks are shown in Annex C.

2.2 Actions Taken by the United States Government to Date

2.2.1 Past and Future Actions by USAID

An introduction to what USAID has supported and intends to do in the future was made by Tom Hobgood, USAID-Washington. The main elements of this introduction were:

- Discussion has taken place over the past two years regarding what can be done to improve cotton, which is a major commodity.
- USAID was looking very seriously at how it could be implemented.
- Support for cotton was being considered within the broad context of agricultural diversification and development.
- USAID's intervention was being made recognizing that no country has developed without improving its agricultural sector.
- The present effort would be concentrated on technical issues that would give practical solutions.
- Two documents that would guide us in our discussions are the report of the cotton assessment and the WACIP program description.
- WACIP would be coordinated by the USAID West Africa Regional Program (WARP) in Accra.

2.2.2 WACIP Assessment Overview

Details of the cotton assessment commissioned by USAID were outlined by Robert Kagbo, USAID-WARP. The objective of the assessment was to establish a clear understanding of the current state of production, transformation and consumption of cotton and by-products in the C-4 countries. The results of the assessment indicated massive increases in production of cotton in the countries despite falling prices. The 15 intervention areas suggested by the assessment were presented. Details of this overview are presented in Annex D.

2.2.3 Possible Interventions Selected by USAID for Support

USAID has developed WACIP on the basis of 7 interventions chosen from the 15 suggested in the West Africa Assessment Study Report. These interventions have been grouped into three major themes shown below: increase productivity; processing, marketing and improving quality; and, institutional/policy development.

Increase Productivity

- Expanding the use of good agricultural practices in cotton producing areas, including addressing soil degradation and fertility problems and improving pest management practices;
- Improving linkages between the U.S. and West African agricultural research organizations involved with cotton;
- Improving the technical, bio-safety, and regulatory capacity for biotechnology-Bt Cotton.

Processing, Marketing and Improving Quality

- Improving the quality of C-4 cotton through better classification of seed cotton and lint;

- Establishing a West African regional training program for ginners.

Institutional/Policy Development

- Supporting policy and institutional reform for private management of the sector;
- Strengthening private cotton producer organizations in business management practices in the C-4 countries.

2.2.4 Training Initiatives to Date

Training activities, which have been carried out by the Cochrane Fellowship Program within the USDA Foreign Agriculture Service was outlined by Don Evans. The program covers training in the US related to agriculture in sub-Saharan Africa and the Middle East. About 100 participants in the training program came from 13 countries each year.

Three training activities have been organized by the USDA and held in the US on classing, integrated soil fertility and integrated pest management. A resume of the training activities are shown in Table 1. The participants for these meetings recommended future participants should be carefully chosen and that training should also take place in Africa.

Table 1. Summary of training given by Cochrane Fellowship Program

TRAINING # 1: JUNE 2005	
GOAL/SUBJECT AREA	ACTIVITIES
Participants to observe cotton classing systems. Develop better contact between US and West African cotton industries.	Attended conferences. Attended training sessions on classing.
TRAINING #2: JULY 2005	
GOAL/SUBJECT AREA	ACTIVITIES
Integrated soil fertility	Soil management training (class and lab work). Established contacts between Americans and West Africans. Met US agricultural experts. Visited Tuskegee University.
TRAINING # 3: AUGUST 2005	
GOAL/SUBJECT AREA	ACTIVITIES
Entomology Integrated pest management	Training conducted by Tuskegee University on: Worker safety; Emerging technologies. Visited farms conduction transgenic cotton development.

2.3 Discussions on Actions Taken By USAID

Comments made by participants or responses given to questions by participants followed the presentations regarding actions taken by the USAID pertaining to WACIP. The main elements of this discussion are outlined below:

- It was pointed out that the process used to arrive at 7 intervention areas instead of retaining the 15 recommended by the Assessment Report was rather involved. Substantial discussion took place between US agencies and the list was narrowed down to areas that were considered critical to the cotton sector, and based on the amount of funding that is available.
- Some thought should be given by USAID to ensure that parastatals can benefit from WACIP.
- Competitiveness and productivity need to be targeted to enable the C-4 countries to get important quantities of cotton into the market.
- During the implementation of the program there must be a clear understanding of how diversification can support economic growth and how to ensure that it is included in the activities of the program.
- Africa is rather weak regarding the products it puts in the market, compared to other competitors.
- USAID has targeted ginning as a major component for adding value during the implementation of WACIP. There was a concern, however, regarding when the countries concerned will put in place processing industries that will produce products for the American market. The need for countries to develop their processing capabilities to the point of producing clothes for export was frequently raised.
- The presentations by USAID indicated interest in setting up a West Africa ginning school. The question was raised as to why the creation of such a school when there is already a school in existence that covers more than this processing activity. It was pointed out that all possibilities will be considered to assess existing facilities place and their suitability for use during the implementation of the WACIP.
- The countries have inadequate manpower in biotechnology and do not have bio-security regulations. Since CEDEAO is in the process of setting up biotechnology policy, so the suggestion was made that U.S. and CEDEAO actions could be combined. There should be more exchange and collaboration between countries. Countries were evolving separately in Biotechnology and this may not be a cost effective strategy.
- The effect of liberalization on the “filiere” for cotton should be investigated.
- In the presentation by the USAID, a suggestion was made to use irrigated areas for growing cotton. This has been done in Mali. It was noted that while irrigated cotton would be economical, it would not be so in the zones suggested. It should take place in zones where farmers do not have other possibilities to earn income.
- A concern was raised regarding the countries that would be involved in the program. Some participants urged that the program should not be limited to just the C-4 countries and Senegal. The response by the USAID was that this was a political decision that mainly concerned those countries.

2.4 Scientific and Technological Issues Linked to WACIP

2.4.1 Contribution by the CORAF Cotton Network to Improving Productivity in the West and Central African Cotton “Filiere”

An overview of the activities of the CORAF/WECARD Cotton Network was presented by its coordinator, Pamazi Loadjassondo, pointing out its achievements and plans for future research and development interventions. (Fuller details of presentation are given in Annex

E). The network covers twelve countries and cotton research is carried out in the development of improved varieties, cotton production, weed science, plant health protection and socio-economics. Results obtained in these areas have created significant impacts. There have been increases in production levels, field yields, ginning yields, and the quality of the fiber, which is highly ranked in the market.

Problems within the cotton system in the countries are related to; distortions in the market due to subsidies, high cost of inputs, poor soils, insect resistance to insecticides, low ginning yields, and inadequate researching funding.

CORAF/WECARD outlined opportunities for future work in the areas of research extension and production. Research should be aimed at developing varieties with yields of up to 3000 kg/ha, reduction of the use of insecticides, improvement of soil quality, and environmental protection. In the area of extension, there is need for improved information and technology transfer to producers. Production activities should include an objective assessment of the use of Bt cotton to determine its economic impact.

2.4.2 Purdue University on Estimating the Economic Costs of Maintaining Barriers to the Introduction of Biotechnology in West Africa

The model developed at the Purdue University was used to determine how Bt Cotton would perform in West Africa. Using data from Bollgard II trials in Burkina Faso and insecticide spraying in Mali, it was shown that the spraying cost of Bt cotton was reduced by 67% while production increased by 20%, compared to conventional cotton. Benefits can be obtained from biotechnology but institutional change towards privatization and improvements in ginning are prerequisites for obtaining the potential benefits. (See Appendix F for a fuller discussion of the presentation.)

2.5 Discussion on Scientific and Technological Issues

Questions, responses and comments from participants regarding the presentations have been grouped and are summarized below:

- If ginning is improved farmers will be able to surmount the technological fee;
- Figures presented during the meeting for Chad in CORAF/WECARD's presentation need to be updated since they do not reflect the real situation. This was due to information not received from Chad when requested;
- CORAF/WECARD is well placed to coordinate the science and technology issues of WACIP;
- Bt cotton cannot be applied everywhere. But there is need to test the technology for its appropriateness;
- Funding for cotton research depends on each country. It was suggested that fees should be levied on cotton to support research;
- There was a general agreement on the need to improve information flow between organizations and countries, within countries and between organizations;
- The results presented on Bt cotton can be extrapolated to other countries, for example from Mali to Burkina Faso for institutional change effects.

2.6 Country Constraints and Opportunities

Various countries (Benin, Mali, Chad and Senegal) discussed the constraints being faced by the cotton sector and also outlined the opportunities that exist for improving the role of cotton in their respective economies. (See Annex G for more information on these country presentations). It was noted that the constraints and opportunities in the countries are similar, although each has its peculiarities. Some of the main aspects of the presentations are the following:

- Some of the producers are reluctant to adopt innovations in cotton production.
- Climatic conditions, such as poor rainfall, make it difficult to plan planting periods.
- Environmental degradation is not adequately taken into account by research.
- Extension services do not provide adequate support to producers.
- Field yields are considered to be inadequate.
- Inputs for cotton production are not always accessible by producers in a timely manner.
- Commercialization of cotton does not adequately benefit producers.
- Ginning efficiencies and operations need significant improvement.
- Countries should move faster towards the privatization of the cotton sector so that producers can have more added benefits.
- Organizations within the cotton sector should be strengthened.
- Transformation of cotton is generally limited to ginning. More value added activities should be developed within the countries.
- The use of biotechnology still needs to be resolved through the better definition of country policies.

2.7 Discussions on country presentations

It was noted that yields vary from country to country. This variation can be attributed to rainfall, soil conditions, production methods used and the quality of seed used for planting. There is need for research in all countries. Mali opposes Bt cotton but legislations are being prepared to change this.

In Benin it was mentioned that constraints and opportunities for value added was not outlined in the presentation, and there was interest whether there were plans to add value to cotton seeds. The response to this was that there is a potential for yields of 2000 kg/ha but there are problems with cotton seed storage and plant health.

Senegal has good quality cotton fiber because growers are encouraged to produce good quality cotton. Transformed cotton should have a market in-country. Cloth production existed but the system has become fragmented.

2.8 Role of Private Sector/Associations

2.8.1 National Cotton Council of America (NCC)

This organization which represents seven segments of the cotton sector in the US, namely; Producer, Ginner, Warehouse, Merchant, Cottonseed, Cooperative, Manufacturer. Its mission is to ensure the ability of all U.S. cotton industry segments to compete effectively and profitably in the raw cotton, oilseed, and U.S.-manufactured product markets at home

and abroad. Being a non-government organization it does not set trade policy but works closely with government to protect the interests of every segment of the Council.

The cotton industry in the US provides over 380,000 jobs in farms, gins, warehouses, cottonseed mills and textile mills. Upland cotton production in 2005 was 4902 metric tonnes. Producers are organized and well instructed in selecting appropriate seed varieties, managing soil nutrients and water, as well as controlling insect pests through integrated pest management.

Due to the use of modern technology the number of gins have decreased from 2254 in 1980 to 896 in 2004, whereas the number of seed cotton ginned increased from 2000 to 5000 tonnes.

More information on the structure, operation, policy development and industry standards of the NCC is presented in Appendix H.

2.8.2 ROPPA

ROPPA is the Network of Farmers and Producers of West Africa and consists of membership from 10 countries, namely Bénin, Burkina Faso, Côte d'Ivoire, Gambia, Guinea, Guinea-Bissau, Mali, Niger, Senegal and Togo. It is intended to extend membership to all countries of ECOWAS.

The creation of ROPPA was motivated by three factors:

Sub-regional integration – Economic, social and institutional arrangements set up by UEMOA including agricultural policies have created a good basis for collaboration.

Decentralization – Rural populations are being made responsible for their future through decision making.

Globalization – Producers are required to become competitive although production conditions and marketing of products in developed and developing countries are unequal.

ROPPA encourages producer organizations to develop the capacity to effectively discuss and defend their interests with their governments. One of ROPPA's priorities is to strengthen the capacities of rural populations.

Activities of ROPPA include:

- Capacity strengthening to understand the problems of producers, take actions themselves, and in collaboration with others, to improve their lives in a sustainable manner.
- Make proposals to policy makers and partners regarding priorities, programs and actions that will allow agriculture to overcome food security.

2.8.3 URECOS – CI

URECOS – CI is a federation of 154,000 producers and 200 grass-roots cooperatives. Its membership represents about 80% of the cotton production in Cote d'Ivoire shown in Table 2.

Table 2. Cotton production in Cote d'Ivoire

Year	1999/2000	2000/2001	2001/2002	2002/2003	2003/2004	2004/2005
Area (ha)	291,000	248,111	284,676	286,220	220,000	270,000
Production (t)	398,723	280,565	370,079	396,416	185,000	350,000
Yield (t/ha)	1.370	1.131	1.300	1.385	0.841	1.300

Its objectives include:

- Represent and defend the interests of member organizations and their producers.
- Provide services aimed at the promotion, organization and re-dynamizing of member organizations.
- Carry out economic and industrial activities that are profitable for member organizations.
- Participate in the setting up of policies relevant to the rural development in Cote d'Ivoire.

2.8.4 Interprofessional Association for Cotton (AIC)

This active association of producers, ginnerers, importers and distributors has the following objectives:

The Interprofessional Association for Cotton (AIC) in Benin is made up of producers, ginnerers and importers and distributors of inputs. Its objectives are to:

- Contribute to the complete privatization of commercial and production activities related to cotton.
- Establish structures that are capable of managing activities of interest to various actors of the cotton filiere.
- Set up the basis needed for the sustainable management of the filiere as determined by the various actors and respecting agricultural policy set up by the state.

Its activities cover research, provision of seeds, training and extension, provision of agricultural inputs, and commercialization. Production can increase by 50% although agronomic problems related to soil fertility, planting dates etc, still limit field yields. The presentation, details of which are in shown in Appendix H, indicate that the AIC is a strong organization that provides good support to actors in the cotton sector.

2.9 Discussion on Private Sector

Participants wanted to know what sort of relationship exists between the NCC and the government. They were informed that that NCC follows the regulations of the U.S. government. There is close collaboration between NCC and the government (USDA, US Environment Protection Agency, Food and Drug Administration) in regulatory areas. There are also relationships with state research organizations. The NCC is eager to see the use of better technology and is interested in training. It was mentioned that the American experience can inspire West Africa to go in the right direction.

Biotechnology was seen to have advantages but it was noted that countries tend to keep quiet about GMOs. Questions asked but not answered were; what should the countries do with biotechnology? And what opportunities exist in using this technology to improve cotton production?

It was mentioned that ECOWAS has the mandate to improve productivity. (Some groups are being set up on water management.)

ROPFA pointed out that farmers' associations have experienced various problems since it was created in 2002. They continuously seek to address problems concerning member organizations.

2.10 Institutional and Policy Issues

2.10.1 UEMOA

A short presentation was made by this organization outlining the following points:

- An agricultural policy was adopted in 2001;
- There is interest in the integration of the regional market;
- The opening of international markets is a key objective;
- Cotton is considered as an important sector for employment, mainly in UEMOA countries;
- In the industrial sector the objective is to achieve 25% of needs in cotton in the medium term;
- A center of excellence for training should be located in Mali.

2.10.2 PURDUE University.

A simulation model on institutional change in the West African cotton sector was presented by Purdue University. It was focused on:

- Getting farmers higher prices;
- The growing concern regarding its share of world cotton exports;
- Making the cotton sector more efficient through reform;
- Higher farm-gate prices through increased competition;
- Increased sector efficiency

The model chose Mali as an example. This country has been slow to reform but has recently committed towards more aggressive reform. The gradual retreat of CMDT from the cotton sector will be completed by 2008

The question of interest was: What would be the economic impacts of privatizing the Malian cotton sector with respect to; efficiency gains by Malian cotton farmers, ginners, government, consumers? The analysis obtained the following gains resulting from modest and full reform as shown in Table 3.

Table 3. Effect of reform on gains experienced by various sectors

Sector	Modest Reform*	Full Reform*
Government	-41	-85
Consumers	3.4	6.4
Ginning	6.7	8.7
Collection	1.2	3.5
Farm	45	96
Efficiency Gains	10.9	11.4

*Numbers are in million US\$

There are significant benefits to be gained by farmers from privatizing the cotton sector in West African cotton producing countries.

3. OUTPUTS OF MEETING

3.1 Identification of Main themes and Intervention Areas

One of the outcomes of this workshop was to identify activities for implementation. Activities were identified by three working groups during the second day of the workshop. Each group comprised of participants from various countries and organizations. A chairman was designated to each group and a rapporteur was chosen by the group.

Seven areas of intervention were identified by USAID for WACIP, from the results of the assessment study, before the meeting. These were discussed and adopted by the workshop participants. Based on the various presentations and discussions during the first day of the workshop, two additional areas of intervention were identified for addition to the initial seven. These nine interventions have been grouped under three main themes. All the identified themes and recommended interventions are shown in Box 1.

Intervention 2, concerning improved access, quality and reduced costs to inputs, is considered to be a constraints in all countries and strongly related to reduced production. Intervention 7, which concerns improving value added from the cotton sector, is regarded as a means of improving benefits to the country in the form of increased production and employment generation by the processing industries, international trade, etc.

Box 1. Identified themes and areas of intervention for implementation.**Theme 1: Increase Productivity**

- Intervention 1. Expanding the use of good agricultural practices in cotton producing areas, including addressing soil degradation and fertility problems and improving pest management practices.
- Intervention 2. Improving access, quality and reduce cost of inputs (seeds, fertilizer and chemicals).
- Intervention 3. Improving linkages between the U.S. and West African agricultural research organizations involved with cotton.
- Intervention 4. Improving the technical, bio-safety, and regulatory capacity for biotechnology-Bt Cotton.

Theme 2: Processing, Marketing and Improving Quality

- Intervention 5. Improving the quality of C-4 cotton through better classification of seed cotton and lint.
- Intervention 6. Establishing a West African regional training program for ginnerers.
- Intervention 7. Improving value added from the cotton sector.

Theme 3: Institutional/Policy Development

- Intervention 8. Supporting policy and institutional reform for private management of the sector.
- Intervention 9. Strengthening private cotton producer organizations in business management practices in the C-4 countries.

3.2 Suggested Implementation Plan

Each of the three working groups were assigned intervention areas the following intervention areas: Group 1 - Interventions 1, 2, 3, 4; Group 2 - Interventions 1, 5, 6, 7; Group 3 - Interventions 1, 8, 9. They were instructed to make suggestions for activities that would be carried out for each of the assigned interventions, specifying how the activity would be carried out, by whom and when. Each working group then presented its findings to the plenary, followed by discussions and adoption of the suggestions. The following table has been compiled to reflect the information collected. Improvements have been made during the writing of this report to improve clarity and to provide supplementary information to enhance the implementation plan.

Table 8. Interventions and activities suggested by workshop for implementation by WACIP

INTERVENTION 1	ACTIVITY	HOW WILL IT BE DONE?	BY WHOM	WHEN
Expanding the use of good agricultural practices in cotton producing areas, including addressing soil degradation and fertility problems and improving pest management practices	1.1 Identify good agricultural practices and develop effective technical guides.	Monitor existing and future cotton protection programs. Identify socio-economic factors, which may be responsible for the low levels of adoption of technological packages. Support research to put in place adapted technological packages for widespread use.	CORAF, USAID, USDA, CEDEAO, Tuskegee University, National and International Research Institutions	Activities start March 15, 2006 and will last the length of the program. Length of the program.
	1.2 Technology Transfer. Transfer existing and appropriate cotton production technologies to farmers through existing extension structures.	Meeting between USAID, CORAF and other partners (CEDEAO, UEMOA, USDA...) to exchange information and formulate appropriate intervention strategies. Strengthen agricultural training and extension institutions.	Producer organizations, producers, research and extension institutions, CORAF, CEDEAO, UEMOA, USDA.	The length of the program.
	1.3 Develop and/or update fertilizer formulations.	Review the status of fertilizer formulations to assess improvements that should be made. Formulations updated according to identified needs.	CORAF, national and international research institutions, USDA.	Short term
	1.4 Promote irrigated cotton.	Assessment of scope and potential for irrigated cotton in C-4 countries. Field testing to verify technologies. Adoption tests and transfer of technologies.	National research institutions, USDA, CORAF, CEDEAO, UEMOA., producer organizations, producers.	Short term Medium term Medium term
	1.5 Integrated management of soil fertility and water.	Conceive national support programs for soil fertility.	Research and extension institutions, cotton producer organizations, sub-regional organizations.	Very short term
		Select and disseminate the efficient ITK in	SNRA, SNV, OPP, USAID	Medium term

		each country in collaboration with researchers.		
		Support institutional reforms that are favorable to giving producers access to inputs.	Countries, OIG, USAID	Very short term
		Support workshops aimed at sharing the best practices in the area.	OIG, USAID, countries	Medium term
		Develop technical innovations for the integrated management of soil and water.	SNRA, SNV, OPP, USAID.	Medium term
	1.6 Integrated plant health management	Select and disseminate in collaboration with research, existing technologies in the area.	USAID	Very short term
		Organize a regional workshop to train trainers.	SRNA/SNV/OPP/USAID	Very short term
		Organize national training workshops.	National institutions, USDA, CORAF	Program life
		Develop innovative techniques for plant health management.	Research and extension institutions, CORAF, USDA	Short/medium term
INTERVENTION 2	ACTIVITY	HOW WILL IT BE DONE?	BY WHOM	WHEN
Strengthening private cotton producer organizations in business management practices in the C-4 countries	2.1 Strengthening of the capacities of OPPs in the management of activities related to cotton.	Training in financial management.	Appropriate institutions. UEMOA,	Short term
		Training in negotiation and lobbying.	Appropriate institutions: countries, donors	Short term
		Provide financial support for OPPs.	Donors, national institutions, producer organizations	Medium term
		Support OPPs using a guarantee fund.	Donors, producer organizations	Medium term

INTERVENTION 3	ACTIVITY	HOW WILL IT BE DONE?	WHO	WHEN
Improving the quality of C-4 cotton through better classification of seed cotton and lint	3.1 Support the implementation of national programs to promote quality.	Improve the management of harvest, storage and transportation of seed cotton by producers to factories.	OPP, SNV, SNRA, donors	Short term
		Improve the ginning process and packaging of the fiber.	Cotton companies.	Short term
		Improve the conditions of transportation of cotton fiber to the ports.	Cotton companies	Short term
	3.2 Strengthen the capacities of OPPs in the control of seed cotton quality.	Training of OPPs in methods for controlling cotton grain quality.	Appropriate institutions : producer organizations, research and extension institutions	Short term
	3.3 Initiate and/or pursue the classing of national production of cotton fiber by the CMIs.	Pursue and strengthen classing equipment in CMIs.	Producer organizations, NCC, Research institutions.	Short and Medium term
INTERVENTION 4	ACTIVITY	HOW WILL IT BE DONE?	BY WHOM	WHEN
Establishing a West African regional training program for ginners	4.1 Develop training modules on ginning of cotton.	Training of managers and heads of ginning factories.	Appropriate institutions: USDA, NCC, producer organizations, research institutions.	Short term
		Training of ginning technicians.		Short term
		Insertion of ginning training into the syllabuses of CERFITEX		Long term.

INTERVENTION 5	ACTIVITY	HOW WILL IT BE DONE?	BY WHOM	WHEN
Improving linkages between the U.S. and West African agricultural research organizations involved with cotton	5.1 Develop relationships between research institutes in the United States and those in West Africa, involved in cotton production.	Training and exchange of experiences through visits and technical support.	Universities, research institutes, international agricultural research centers, NCC, USDA, CORAF	Throughout the program
INTERVENTION 6	ACTIVITY	HOW WILL IT BE DONE?	BY WHOM	WHEN
Improving the technical, bio-safety, and regulatory capacity for agricultural biotechnology, including Bt cotton	6.1 Strengthen the technical, biosafety and agricultural biotechnology capacity within countries.	<p>Establish a regulatory framework.</p> <p>Provide training in: research, risk evaluation, risk management, inspection, monitoring of crops, conservation of natural resources.</p> <p>Disseminate results amongst the actors.</p>	Government, private organizations, national research services, national training and extension services, sub-regional organizations, producer organizations, inter-professional cotton organizations.	During the whole program.
INTERVENTION 7	ACTIVITY	HOW WILL IT BE DONE?	BY WHOM	WHEN
Supporting policy and institutional reform for private management of the sector	7.1 Support and strengthen liberalization policy and the ongoing privatization of the management of the cotton filiere in West Africa.	<p>Support the country in analyzing policy and the establishment of reform institutions within the filiere.</p> <p>Strengthen the technical and financial management capacity of the institutions involved in the reform.</p> <p>Support the technical capacity and the capacity to negotiate of private actors, in particular the producers.</p> <p>Strengthen the technical intervention structures</p>	Governments, cotton inter-professionals, technical structures, private organizations.	Through the life of the program.

INTERVENTION 8	ACTIVITY	HOW WILL IT BE DONE?	BY WHOM	WHEN
Improve access, quality and reduce cost of inputs (seeds, fertilizer and chemicals)	8.1 Establish the status and propose a plan of action for each of the C-4 countries plus Senegal, for fertilizer, planting seeds and pesticides.	Carry out assessment of the bottlenecks in the availability of inputs by producers. Create and implement enabling policies.	IFDC, national research institutions, CORAF, producer organizations, government institutions.	Mid February to beginning of June.
INTERVENTION 9	ACTIVITY	HOW WILL IT BE DONE?	WHO	WHEN
Improve value added from the cotton sector	9.1 Carry out a review and synthesize all the studies related to cotton processing in each of the countries and propose ways of improving value added.	Carry out a study of the cotton processing sector to determine possible entry points. Support pilot activities in processing.	Purdue University Producer organizations, US NCC, entrepreneurs.	June and July 2006

3.3 Advisory Committee Structure

A brief discussion took place to seek views on how WACIP can be coordinated. The following points were raised, which will be used at a later stage to develop the details of the governance of the program:

- The setting up of a focal point at the regional level would need to take into account the available mandates and strengths at the regional level;
- Regional coordination exists within CORAF, UEMOA and ECOWAS;
- Country level coordination will include the involvement of production organizations and existing structures within the cotton filiere;
- In general, use will be made of all existing structures and the creation of new ones will be avoided.

3.4 Workshop Communiqué

In order to inform policy makers of the results of the workshop a communiqué was approved by the participants. The text presented in Appendix I. This would be sent by USAID to various partners shortly after the workshop.

3.5 Next Steps

USAID outlined what will happen after the workshop. The main points are the following:

- The USAID has a West Africa Regional Program (WARP) based in Accra Ghana and the activities for WACIP will be coordinated from there;
- A major preoccupation will be to develop an advisory structure for the program. This will have to include all stake holders and discussions will take place with CORAF, CEDEAO and UEMEOA, and others regarding the best approach to use.
- WARP will be holding discussions with USDA, American universities, NCC, etc to see what contributions they can make to the program.
- The findings of the report will be used during the next weeks with the view of developing an implementation plan.
- Care should be taken so that the program is not made up of nine separate small projects. Implementation will therefore take place with the participation of organizations that can carry out multiple programs.

ANNEX A. WACIP WORKSHOP AGENDA AND PARTICIPATION

Agenda

The workshop agenda is shown in Appendix A. The meeting was opened by the USAID Mission Director in Benin. This was followed by an introduction of meeting participants after which USAID presented the workshop's objectives and expected outcomes. A brief presentation of the cotton assessment study, the design of WACIP and training activities carried out so far, were presented by USAID and the United States Department of Agriculture (USDA). The C-4 countries and Senegal then presented country constraints and opportunities within the cotton sector.

During the afternoon session of the first day science and technology issues were presented by Conseil Ouest et Centre Africain pour la Recherche et le Developpement Agricoles (West and Central African Council for Agricultural Research and Development) CORAF/WECARD, USAID and Purdue University. Private sector organizations such as the National Cotton Council of America (NCC), the Network of Farmers and Producers of West Africa (ROPPA), the Inter-professional Association for Cotton (AIC) presented their work being carried out that was relevant to WACIP. Institutional and policy issues were then discussed by UEMOA, AIC and Purdue University.

The morning session of the second day of the workshop was devoted to small group discussions on activities, which should be considered for supported by USAID. Each of the three groups presented its report in plenary, followed by detailed discussions. Issues related to coordination of the program and the next steps were then discussed, after which the meeting was brought to a close.

AGENDA - Cotton Improvement Program Planning Workshop, Cotonou, Benin January 25-26, 2006

	TOPIC	SPEAKER
DAY 1	JANUARY 25, 2006	
0830 –0900	Registration	
0900 –0930	Welcome and opening remarks	Benin, USAID Mission Director, ECOWAS
0930 –0945	Introduction of participants	Robert Kagbo – USAID/WARP
0945 – 1015	Workshop objectives and expected outcomes	Tom Hobgood – USAID/Washington
1015 – 1045	Coffee Break	
1045 – 1115	USG Actions to Date: Cotton Assessment, WACIP design, Training activities	Robert Kagbo/Tom Hobgood – USAID, Don Evans - USDA
1115 -1200	Science and technology issues and Program	CORAF, USAID, Biotech – Purdue University
1200 – 1300	Discussion	Chair, Facilitator
1300 – 1400	Lunch	
1400 – 1430	Panel Discussion – Country Constraints, Opportunities	C-4 Countries and Senegal

1430 – 1500	Discussions	Chair, Facilitator
1500 – 1515	Coffee Break	
1515 – 1545	Panel Discussion – Role of private sector and associations	NCC, ACA, ROPPA, AIC
1545 – 1600	Discussion	Chair, Facilitator
1600 - 1630	Institutional/Policy Issues, Opportunities	UEMOA, AIC, Purdue University
1630 – 1645	Discussion	Chair, Facilitator
1645 – 1700	Review of Day 1 / Objectives for Day 2	Facilitator
1800 – 1900	Conference Steering Committee Meets	
DAY 2	JANUARY 26, 2006	
0900 - 0945	Objectives for working groups and methodology	Facilitator
0945 - 1230	Working Groups	Chair / Rapporteur/ Facilitator / USAID
1230 - 1330	Lunch	
1330 – 1630	Working Group presentations and discussions	Rapporteurs / Facilitator
1630 - 1715	Advisory coordination and management issues	Facilitator
1715 -1730	Next steps	Tom Hobgood, Jeff Cochrane - USAID
1730	Closure	Tom Hobgood – USAID, Washington

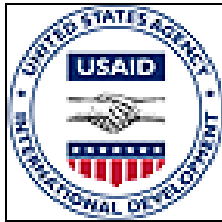
Participation

Participants came from several countries; Benin, Burkina Faso, Cote d'Ivoire, Mali, Nigeria, Senegal, Tchad, Togo and USA. They represented government institutions, the private sector, cotton associations, educational institutions and West African regional institutions.

These stakeholders were fully involved in the meeting in various ways. Chairpersons were participants from the Ministry of Commerce, Senegal and ECOWAS and rapporteurs were from Sahel Institute / Permanent Interstate Committee for Drought Control in the Sahel (INSAH/CILSS) in Bamako and UEMOA in Burkina Faso. The steering committee of the workshop, which met twice during the two days to plan certain aspects of the workshop, comprised of participants from the USG and regional organizations such as USAID, ECOWAS, UEMOA, ROPPA, INSAH/CILSS and CORAF.

Due to logistical problems related to travel from Burkina Faso, invited persons from government institutions were unable to attend the meeting.

APPENDIX B. LIST OF PARTICIPANTS



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Stakeholder Consultation on the New USAID Led West Africa Cotton Improvement Program (WACIP)

Cotonou, 25 - 26/01/2006

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ANNEX C. OPENING REMARKS

Opening Remarks

The meeting was opened by Mr. Rudolf Thomas, Director, USAID, Benin. He pointed out the USG's awareness of the important role cotton plays in the life of millions of producers in West Africa. He reiterated the commitment of the U.S. to provide support to the C-4 countries, to improve the productivity of cotton and to strengthen the capacity of the sector to participate effectively in world commerce. The USAID, he mentioned, has carried out an assessment of the cotton sector in 2004 and the results were discussed at the ministerial meeting organized in Bamako in early in 2005. This, he pointed out led to the development of WACIP, and this meeting was aimed at developing concrete activities for the program. He asked participants to work with the USAID to develop a program that is effective and which will have good impact. He finally thanked WARDA and the Beninois Government for their collaboration in organizing the workshop.

Dr. Daniel Eklou, Director, Agriculture, Rural Development and Environment, ECOWAS, in his opening address thanked the USAID for organizing the workshop. He recalled various actions that have been taken by the EU regarding the improvement of access to markets and the USAID proposed support to C-4 countries to improve competition using Biotechnology interventions. He pointed out that in Hong Kong the proposals by African countries were not taken into account and was therefore glad to see the present USAID initiative. This workshop he felt would start a discussion to determine: how countries could benefit from international trade regulations; what actions countries should take; what role regional organizations could play. Dr. Eklou reminded participants of ECOWAS' collaboration with FAO and others on investment and water management issues. While the present cotton initiative was welcomed and supported by ECOWAS, he stressed the need for WACIP to go beyond just cotton but to consider diversification of agricultural products. This cotton initiative falls within the Agricultural Policy that ECOWAS adopted in 2005 and within which diversification of agricultural products is an important component.

ANNEX D. WACIP ASSESSMENT OVERVIEW

An overview of the cotton assessment carried out by USAID in 2004 was presented by Robert Kagbo, USAID-WARP.

Objectives of the assessment

Establish a clear understanding by the USG of the current state of production, transformation, and consumption of cotton and by-products in C-4 countries.

The assessment was carried out taking into account the need to focus on several main points including:

- Improving extension services
- Technology development and transfer
- Biotechnology Options
- Agricultural production diversification
- Value-adding operations
- Improving infrastructure
- Grading, classing, ginning, marketing
- Strengthening industry management
- Good governance and institutional capacity building

Issues overview

The assessment indicated a massive increase in regional production of cotton lint since economic liberalisation began in West Africa in the early 1980s. Overall production in the three production zones in West Africa, i.e., (Mali, Burkina Faso, Cote d'Ivoire), (Togo, Benin), (Tchad and Cameroon) has increased from 200,000 tonnes in the 1970s to over 1 million tonnes in the late 1990s and early 2000s - with cotton lint reaching more than 1.2 million tonnes in 2003. This shows the high capacity of West African farmers to respond to market demand and attempt to maintain income through increased production despite falling prices.

West African cotton exports have progressively increased over the past forty years and may account for 13% of the international market in 2004/2005, ranking second to the US. Certain countries in the CFA Franc zone are highly dependent on cotton exports. For example, cotton accounts for almost 50% of the national export revenue of Burkina Faso, between 32% and 36% for Benin and Chad and 14% for Mali.

Interventions Suggested by Assessment

The assessment suggested 15 interventions that may be considered within the WACIP and are outlined below:

- Strengthen private agricultural organizations;
- Link U.S. and West African agricultural research organizations;
- Improve the enabling environment for agricultural biotechnology;
- Improve seed production, quality, quality, certification and utilization;
- Improve tendering, quality assurance, and distribution of agrochemicals;
- Expand agricultural and rural credit;
- Develop alternative approaches to technology generation and transfer for the cotton sector under the assumption of privatization;
- Arrest soil degradation and loss of fertility in cotton areas;

- Expand the use of good agricultural practices in cotton farming systems;
- Reduce post-harvest losses and costs through better practices, handling and logistics;
- Establish a West African Regional Ginning school ;
- Reduce contamination in C-4 seed cotton and lint;
- Improve the quality of C-4 cotton through better seed cotton grading and lint classing;
- Better management of critical risks confronting the C-4 cotton sector;
- Improve competitiveness of selected C-4 textile and apparel enterprises.

Summary of Major Events Linked to WACIP

March 2004: The World Trade Organization Meeting was held in Cotonou during which the USG made a commitment to provide support to the C-4 countries.

September – October 2004: The USAID carried out the Cotton Assessment mission to the C4 countries plus Senegal.

January 2005: A high-level meeting of ministers was held in Bamako to discuss the findings and recommendation of the Cotton Assessment Study.

January 2006: Workshop was held for main stakeholders to discuss and identify WACIP actions and activities that would lead to the implementation of the program.

APPENDIX E. ACTIVITIES OF THE CORAF COTTON NETWORK, PROBLEMS AND PERSPECTIVES

The coordinator of the CORAF/WECARD Cotton Network, Pamazi Loadjassondo presented the organizations experiences and future directions for research on cotton in West/Central Africa. The cotton network (covering twelve countries) is one of nine commodity networks being coordinated by CORAF/WECARD. The last meeting of researchers of the network took place in Cotonou, May 10-12, 2005, during the second West and Central African Cotton Conference co-organized with IFDC and the National Institute of Agricultural Research of Benin.

Cotton research in all the countries is carried out in four areas:

- development of improved varieties;
- improvement of production techniques and weed science;
- plant health protection for cotton;
- agro-socio-economic studies.

Research Results Obtained

Improvement in production techniques and weed science.

- Development of fertilizer formulations that are adapted to different soil types of various countries.
- Determination of dates and types of sowing dates of weeding, stand by hectare, types of formulations of herbicides usable on the crop.
- The fertilizer formulations, which were developed nearly 30 years ago, appear to be inappropriate for the soils that have become progressively poor, especially due to the lack of potassium and magnesium in nearly all countries.

Plant health protection

- Knowledge of parasites in each country and the development of different programs to combat them.
- Classic program to treat pests and diseases of cotton.
- Management of insect pest resistance.
- Determination and recommendation of effective plant health products that are less dangerous to humans and the environment.
- Recommendations on equipment to use and precautions to take to avoid poisoning.

Agro-socio-economic studies

Socio-economic studies have been ongoing in Togo since 1983 and recently in Burkina Faso, and irregularly in other countries. These studies have, at least in Togo, provided information on the structure of the sector, the rate at which research recommendations are applied, the threshold of profitability of cotton production, which up till recently was one tonne per hectare.

Impacts

Production: There has been a spectacular increase in cotton production over the past 30 years due to these research activities. For example in Togo cotton seed production increased from 20,000 to 187,000 tonnes from 1979/80 to 2002/2003 respectively.

Field yields: Average field yields in all countries increased from 300 kg/ha in 1950 to 1200 kg/ha in 2001/2002.

Ginning yields: Fiber yield after ginning increased from 35% in 1950 to 43-45% in 2002/2003 depending on the variety and country.

Quality of cotton fiber: The fiber of cotton varieties used is ranked highly in the market.

Problems Experienced

The African cotton “filière” is experiencing the following problems:

- Instability of the cotton market due to distortions caused by subsidies given by developed countries to their producers;
- High cost of inputs. Several African countries are now requesting developed countries to reduce or stop these subsidies or pay compensations to Africans to offset their losses.
- Poor soils due to lack of potassium, magnesium, etc;
- Resistance developed by insect pests to insecticides;
- Lowering of field yields;
- Increase in production especially due to increase in area cultivated;
- Ginning yields are low in certain factories;
- Very low level of funding being available for cotton research

Perspectives and Recommendations

The CORAF/WECARD Cotton Network presented some ideas for future action in the areas of research, production and extension. These are summarized below.

Research

- Develop early varieties with higher yields (3000 kg/ha), ginning yields greater than 45%, and good characteristics (color, length, maturity, fineness and strength).
- Introduce and test genetically modified cotton in order to considerably reduce insecticides and subsequently the cost of production.
- Apply new formulations for fertilizer to soils, which are becoming poorer.
- Space dates for planting and weeding depending of rainfall, which is getting progressively reduced.
- Manage the resistance of insect pests to plant health protection products.
- Develop new formulations for effective plant health products that cause less damage to the environment.

Extension

- Make use of research results.
- Develop technical handouts of new technologies that are ready for application and ensure its transfer to producers.
- Monitor and evaluate the application of these technologies and use the results to improve research output.

Production

- Useful adoption of all introduced technologies.
- Monitor carefully the recommended technical procedures because the new, more productive varieties also need more care.
- Finance research on cotton by levying a research fee per kg of seed cotton produced.
- Take steps to get other donors involved in financing cotton research.
- Authorize research GM cotton with the aim of using the technology.
- Take the necessary steps to protect the local varieties in each country.
There is the risk that multinational companies will make free use of these varieties without benefit to local producers.

ANNEX F. ESTIMATING THE ECONOMIC COSTS OF MAINTAINING BARRIERS TO THE INTRODUCTION OF BIOTECHNOLOGY IN WEST AFRICA – PURDUE UNIVERSITY

Jeffrey Vitale of Purdue University explained a model developed to show how well Bt crops may work in West Africa. There are presently regulatory/legislative barriers to the production of Bt crops. This is in some cases based on fears and concerns. There should be a major shift from rhetoric to objective actions. This will help to determine the opportunity costs of establishing such regulatory barriers and of the society not moving into the biotechnology era. The analysis presented sought answers to the question of how Bt crops perform in West/Central Africa, what benefits farmers and society derive, and whether farmers can afford Bt crops.

The countries suffer from significant crop losses, existing control measures are growing obsolete, the insect problem is still prevalent and does not appear to be reducing. Bt cotton has proven itself in many parts of the world and seems suitable for introduction in West/Central Africa.

Purdue's model used data from Bollgard II trials from Burkina Faso and insecticide spraying from CMDT, Mali's cotton board. Table F.1 indicates that Bollgard II needed 67 percent less sprayings (a reduction in spraying cost of 67%), and 20 percent increase in cotton yield, compared to conventional cotton.

Table F.1. Bt Cotton Data used in the model

Variety	Pest Sprayings (#)	Spray Cost (\$/ha)	Spray Cost (\$/ha)
Conventional	6	60	1200
Bollgard II	2	20 (decrease of 67%)	1440 (increase of

The economic impact of Bt cotton drops below \$10 million as the technology fee gets greater than about \$45/ha, using existing institutions. But with privatization the economic impact at the same technology fee is about \$35 million, which indicates that farmers would be able to get a higher share of the world cotton price.

It is concluded that Bollgard II has substantial impacts in Mali 23 to 47 \$US Million. This is a good indication of the potential benefits of Bt cotton in the sub-region. There is however need for institutional change towards privatization for farmers to benefit from Bt technology. The ginning industry should be improved to enable access to the potential increased benefits.

ANNEX G. COUNTRY CONSTRAINTS AND OPPORTUNITIES

Benin

The Permanent Secretary of AIC presented the constraints within Benin under various areas; production, commercialization, ginning, organizations. The information is summarized in Table G.1

Table G.1. Resume of Constraints and Opportunities in the cotton sector in Benin

PRODUCTION	
SUB-AREA	CONSTRAINTS/OPPORTUNITIES
Cotton Research	<p>The pertinence of some innovations (plant health protection, planting dates, etc) is contested by cotton producers.</p> <p>Recommended planting periods are not well adapted to the observed rainfall.</p> <p>Fertilizer formulations are becoming less adapted to the soils in the same ecologic zone.</p> <p>Problem of environmental degradation not adequately taken into account by research.</p>
Training and Extension	<p>Average yields of seed cotton not high enough in the centre and the south of the country.</p> <p>Level of extension support to producers is low.</p> <p>Performance of extension agents is in adequacy.</p> <p>Inadequate monitoring of extension agents.</p> <p>Insufficient involvement of producers in the management of extension activities.</p> <p>Process of agricultural sub-contracting by producers not started.</p>
Supply of Cotton Seed	<p>Poor estimation of need for seeds causes substantial wastage.</p> <p>Poor storage conditions at the village level.</p>
Supply of agricultural inputs	<p>Doubtful quality of inputs delivered by certain suppliers.</p> <p>Inadequacy between quantities of input ordered by producer organizations and real needs.</p> <p>Use of inputs for cotton, by cotton- and non cotton-producers for the production of foodstuffs.</p> <p>Inputs are not obtained on time.</p>
COMMERCIALIZATION	
	<p>Absence of standardized costs on which to base negotiations for the purchase of seed cotton.</p> <p>Poor estimations of cotton production. (There are large differences between estimated and actual production.)</p> <p>Commercialization of products starts late.</p> <p>Sale prices for seed cotton are fixed very late.</p> <p>Late payments for seed cotton that are delivered by farmers.</p> <p>Inadequate classing of seed cotton.</p>
GINNING	
	<p>Inadequacy between existing capacity and the national production of seed cotton.</p> <p>Certain ginners do not respect the existing mechanisms.</p> <p>Little respect for the procedures in place regarding environmental</p>

	protection within the factories.
ORGANIZATION OF GROUPS	
Institutions	<p>All actors are not represented in AIC.</p> <p>Difficulties in respecting the deadlines for the activities for the agricultural season.</p> <p>Absence of internal mechanisms to penalize actors who do not respect agreements.</p> <p>Specific legislations for the management of the cotton network not yet available.</p>
Professional Families	<p>A large number of organizations are in the process of restructuring.</p> <p>Absence of procedure manuals for the structures of networks within the “filier”.</p> <p>Restructuring not yet achieved among professional families.</p>
FINANCING	
	<p>Absence of funds to enable the stabilization of purchase price from producers.</p> <p>Absence of a sustainable mechanism to mobilize resources to finance critical activities.</p>

Mali

Cotton is grown on about 20 to 30 % of the agricultural land in the south and west of Mali, yielding 600,000 tonnes of seed cotton and 252,000 tonnes of cotton fiber, and is the principal source of revenue for about 3 million producers. Even though cotton seed production has increased during the past years, there has been a drop in productivity; 1359 kg/ha in 1990 compared to 994 kg/ha in 2002.

Measures envisaged to improve productivity, competitiveness and sustainability of cotton production are:

- Establishment of a framework for the exchange of scientific and practical knowledge and experience between different countries in the region.
- Establishment of various networks between actors in the cotton sector.
- Provision of logistical support and equipment to scientific institutions.
- Provision of material and training support to professional organizations of actors in the cotton sector.
- Production of news letters and information regarding network activities.
- Organize meetings to exchange information and experiences between different partners in the “filier”.
- Improve ginning efficiency by the introduction of new actors.
- Process a large portion of the national production locally in order to increase the benefits of value added.
- Improve the capacity of all actors, especially producers, in view of restructuring and privatization of the sector.

Some suggested measures that could be used to reorganize and restructure the cotton “filier” are:

- Obtain a better understanding of production costs.
- Improve field yields.
- Take steps to make producer organizations more active.

- Strengthen the participation of the private sector, producers and decentralized local groups.
- Increase the contribution of the sector to the national economy.
- Establish prices based on free negotiations between actors.

Chad

Two varieties of cotton are cultivated. Insects and weeds are pose problems and biotechnology is seen as possible means of improving production. Production constraints are similar to that of Benin. Some other constraints pointed out are:

- Research activities and infrastructure are inadequate.
- Financing for research and other activities is low.
- Research infrastructure is inadequate.
- Support infrastructure such as electricity is in adequate.
- Qualified personnel are limited.

Senegal

Cotton production in Senegal accounts for 5% of total exportations. About 30,000 to 50,000 ha is cultivated each year, each farmer planting an average of about 0.6 ha. Production (between 30,000 and 50,000 tons of seed cotton) depends on the intensity of the rainy season, the competitiveness with groundnuts and insect pressure. It is cultivated in a rotation system.

Constraints

- Production is essentially rain-fed.
- The existing climate is not favorable to rain-fed production.
- Planting is being done late.
- The absence of distribution and credit systems for inputs that are accessible outside the cotton filiere.
- The existence of high insect pressure.
- Low productivity is one of the most important problématiques.
- Yields are at levels that are not compatible with the high cost of the recommended technology.

Opportunities

The quality of Senegalese fiber is very good. This is the result of a research by the Senegalese Institute for Agricultural Research and the support of SODEFITEX, and the involvement of producers in the cotton zone, Kolda and Tambacounda. Some opportunities that exist for the cotton “filiere” are:

- Producers are grouped within a federation (FNPC).
- The presence of spinning and weaving units in Senegal (NSTS, SOTEXKA).
- The port of Dakar, given its capacity, can be used to export fiber to the world market.
- Banks provide credit for inputs and agricultural material.

Perspectives

- The environment of the “filierre” makes it necessary to perpetually question the practices and the technological packages vulgarized.
- The development of a cotton crop based on techniques that quickly establish the crop and its production.
- A plant health protection oriented towards integrated pest management and the selection of more and more early varieties that are resistant to pests.
- The analysis of the institutional environment and services within the “filierre”.
- Analysis of the practices and techniques of production.
- Use technologies with different production costs in the case where there is more and more question of competitiveness.
- Build an integrated production program for the management of production and pests.

ANNEX H ROLE OF PRIVATE SECTOR/ASSOCIATIONS

National Cotton Council of America (NCC)

Structure

The structure and services of the NCC was outlined by the vice-president, Technical Services. It consists of 375 delegates covering 7 segments; Producer, Ginner, Warehouse, Merchant, Cottonseed, Cooperative, Manufacturer. Each industry segment is represented by at least national interest organization representing that segment's interest.

The Council's Board of Directors, which meets three times a year, is elected by the delegates and is comprised of five directors from each of the seven segments. Each director serves in one of the Board's standing committees; Finance, Budget, Membership and Credentials, Executive and Council Operations.

NCC's mission is to ensure the ability of all U.S. cotton industry segments to compete effectively and profitably in the raw cotton, oilseed, and U.S.-manufactured product markets at home and abroad.

NCC, being a non-government organization is not empowered to set domestic and trade policy for cotton. It is nevertheless the main forum for working with government and others to protect the interests of every segment of the Council.

Funds for the operation of the Council are obtained by voluntary contributions by members, levied on a per-bale or per-ton of seed basis. Current dues rates for the different segments are: 55 cents per bale for a combined producer-ginner contribution, 7.3 cents per bale for merchants-cooperative marketers, 10 cents per ton for cottonseed crushers and dealers, 3.7 cents per bale for warehousemen, and 15 cents per ton for textile manufacturers. About eighty percent of the members pay their contributions each year.

Policy Development Process

Policies are developed based on recommendations made by the Council's six program committees, which include:

Research and Education - Cotton quality and classification, boll weevil and pink bollworm control programs, cottonseed variety issues and USDA research and education programs.

Packaging and Distribution - Bale packaging materials and standards, distribution issues such as flow shipment, warehousing, and computer and electronic technology.

Public Relations and International Marketing Development - International public relations and promotional program in market development, forward contracting and export sales, transportation and labor, public attitudes, and information services.

International Trade Policy - Trade policies and negotiations, as well as regional trading arrangements and import issues.

Farm Program and Economic Policy - Farm program details and economic aspects of tax and labor policies.

Health, Safety and Environmental Quality - OSHA and EPA regulations regarding health, safety, and environmental responsibilities.

Cotton Industry and Production

A profile of the cotton industry and the level of cotton production in 2005 are shown in Tables H.1 and H.2.

Table H.1. US Cotton Industry Profile

Sector	Businesses	Jobs
	Number	
Farms	24 805	122 811
Gins	896	31 848
Merchants	327	2 844
Warehouses	336	9 938
Cottonseed Oil Mill	14	490
Textile Mills	1 559	213 095

Total **27 937** **381 026**

Table H.2. US Upland Cotton Crop in 2005

Region	Harvest Area	Yield	Production
	Thou. Ha	Kg/Ha	Thou. MT
Eastern	1 216	883	1 074
Memphis	1 574	1 033	1 626
Texas-Oklahoma	2 343	764	1 790
Far West	293	1 408	412

Total 5 426 904 4 902

Cotton Variety Selection

The variety of cotton seed planted is the responsibility of the individual farmer, who chooses from hundreds of varieties. Choice is based on the variety that gives the optimum combination of yield and fiber quality.

Soil Nutrient Management

Fertilizers are used carefully to help achieve optimal soil fertility, while maintaining soil and water quality. Cover crops and crop residues are used to hold soil in place and add organic matter to the soil. Producers rotate cotton with other crops like soybeans, peanuts, or corn. This practice helps to sustain soil fertility and helps control crop-specific diseases and pests.

Water Management

Irrigation methods are used to produce about 35 percent of US cotton crop. Water management methods are designed to optimize yields and quality while conserving and protecting water resources. Soil quality is maintained by limiting the use of water high in salts and minerals.

Cotton Insect IPM

Major cotton pests such as the boll weevil, pink bollworm, cotton boll worm, white fly, nematodes, and plant bugs are controlled using Integrated Pest Management (IPM) practices. Use is made of natural enemies, pest-resistant plants, cultural management, and U.S. Environmental Protection Agency-approved plant protection chemicals.

US Ginning Industry

The number of gins in the US industry decreased from 2254 in 1980 to 896 in 2004 while the number of tonnes of cotton seed ginned increased from 2000 to 5000 tonnes. This increase in production has been due to factors including the implementation of the cotton module system of seed cotton storage, which has increased the ability of gins to operate for longer periods and thus providing service to a larger trade area. Old and smaller facilities have been closed and the expected trend is to have fewer but more modern gins with larger processing capacities.

Industry Standards

Standards for processing, handling and logistics of cotton are developed based on collaboration between the NCC and the USDA, and enforced by the USDA and industry contract. Industry committees of the National Cotton Council and USDA work together to develop standards and specifications addressing the processing, handling, and logistics of cotton. These standards are enforced by USDA and through industry contracts. Assigning a unique number to each US cotton bale has significantly improved storage and handling efficiencies, mill receiving and inventory operations, using electronic information system of data processing.

Interprofessional Association for Cotton (AIC)

The Interprofessional Association for Cotton (AIC) in Benin is made up of producers, ginnerers and importers and distributors of inputs. Its objectives are to:

- Contribute to the complete privatization of commercial and production activities related to cotton.
- Establish structures that are capable of managing activities of interest to various actors of the cotton filiere.
- Set up the basis needed for the sustainable management of the filiere as determined by the various actors and respecting agricultural policy set up by the state.

The AIC provides management and monitoring support through: collection of economic and agricultural information; development of plans for the planting season; technical coordination of activities related to the management of agricultural inputs and the commercialization of cotton seeds; mediating on economic and financial issues between different operators. It carries out its activities of collaboration with institutions concerned with finance and management of agricultural inputs.

Cotton Research

The Centre for Agricultural Research on Cotton and Fibers. Technological packages are available that can allow farmers to obtain yields of 50% higher than present production. It is possible for producers to have field yields of 2000 kg/ha using the recommended variety H279-1 and following the recommendations for its cultivation. Some agronomic problems that still need to be resolved are; the improvement of formulations for fertilizers, revision of planting dates, maintenance of soil fertility and management of post-harvest residues. Some problems exist regarding the procedure for developing and evaluating the annual research programs, which presently does not involve all principal actors.

Provision of Improved Seeds

The National Council for Cotton Seeds is responsible for the coordination of activities pertaining to seeds for planting. It is constantly faced with the problem of: poor definition of needs, which leads to significant wastage and illegal selling of planting seeds; high risk of mixing planting seeds due to inadequate handling methods; deterioration of planting seed quality due to poor storage conditions; and high cost of seeds.

Training and Extension

AIC has formed partnerships with certain specialized institutions over the past five years. Technical support is thus provided by 257 extension agents and 12 agricultural advisers to cotton producers within the country. Some parts of the country have demonstrated increased production whereas others have shown a decline. Some areas that need improvement are:

- Difficulty of mobilizing resources needed for technical activities;
- Poor support being provided by the CeRPA to extension officers in the field;
- Inadequate performance of extension officers in applying extension techniques;
- Insufficient attention being given to training programs;
- Little interest being given by producer organizations to monitoring by field agents.

Provision of Agricultural Inputs

Agricultural inputs for cotton are provided by the Cooperative for the Provision and Management of Agricultural Inputs (CAGIA). All technical services of the Ministry of Agriculture, Livestock and Fisheries and the Ministry of Industry, Commerce and Employment Promotion are closely involved in all stages of the activities of CAGIA. Although the situation of seed availability continues to improve there is need for producers to receive in time, the type and quantities of inputs he/she has ordered.

Commercialization

AIC and other institutions, Central de Securitisation des Paiements et du Recouvrement (CSPR) and Federation des Unions de Producteurs (FUPRO), are responsible for the commercialization of cotton in Benin. Activities carried out concerning commercialization include:

- Estimation of production of seed cotton.
- Fixing of purchase price of seed cotton.
- Determination of quotas allocated to various ginneries.
- Training of members of buying teams from GVPCs.
- Hiring and training of officers responsible for monitoring the quality of cotton in the field and in the factories.

Financing of the Cotton filiere

Importers pre-finance the purchase of inputs and are reimbursed when farmers sell their cotton through the CSPR. Some of the producers find it difficult to pay for the inputs when their production is below expectations. The various services are financed by a levy on each kilo of cotton bought and vary each year between 10 and 20 FCFA. The funds are managed by AIC's executive office.

ANNEX I. COMMUNIQUE RESULTING FROM THE WACIP WORKSHOP

Senior technical leaders from the Cotton 4 Countries (C-4) (Benin, Burkina Faso¹, Chad, and Mali) plus Senegal, representatives from regional organizations – the Economic Community of West African States (ECOWAS), the West and Central African Council for Agricultural Research and Development (CORAF/WECARD), the West African Economic and Monetary Union (UEMOA), the Permanent Inter-State Committee for Drought Control in the Sahel (CILSS), private organizations – Network of Farmers and Agricultural Producers Organizations in West Africa (ROPPA), Inter-professional Cotton Association (AIC), and staff from the United States Agency for International Development (USAID), the United States Department of Agriculture (USDA), and the American National Cotton Council (NCC) met in Cotonou, Benin from January 25 to 26 to consult on the new U.S. Government sponsored West Africa Cotton Improvement Program (WACIP).

This meeting was held with the aim of putting into action the conclusions from the meeting held on March 24 and 25, 2004 at Cotonou in Benin. During that meeting, the U.S. Government made a commitment to support efforts of African countries, particularly the C-4 nations (Benin, Burkina Faso, Mali, Chad), to increase cotton productivity and to help them profitably participate in world trade.

The purpose of this meeting in Benin on January 25 to 26 was to discuss proposed interventions in the WACIP and to identify country-specific and regional activities for implementation under the USG-funded WACIP. The purpose of WACIP is to improve the yields and incomes of cotton producers in the C-4 countries plus Senegal.

Recognizing that:

1. Cotton is critically important to the C-4, serves as one of the main drivers of economic growth, employment, and incomes, and is the main economic activity of more than one million households in the C-4, and provides livelihoods for more than ten million farmers;
2. Reducing hunger and poverty in Africa is of key strategic importance to Africa;
3. The United States has strong political, economic, and humanitarian interests in supporting higher agricultural growth in Africa; and
4. Improving the productivity, quality, marketing and value adding in cotton contribute to increased incomes, create employment, and stimulate economic growth;

The meeting recommends that the development of the cotton sector be viewed in terms of the entire agricultural development, particularly diversification, within the overall regional implementation of the ECOWAS Agricultural Policy and the Comprehensive Agricultural Development Program (ECOWAP/CAADP). The meeting agreed that WACIP supports the following nine cotton-specific interventions:

¹ Burkina Faso was not represented

- Expanding the use of good agricultural practices in cotton producing areas, including addressing soil degradation and fertility problems and improving pest management practices;
- Improving linkages between the U.S. and West African agricultural research organizations in the C-4 plus Senegal, that are involved with cotton;
- Improving the technical, bio-safety, and regulatory capacity for biotechnology - Bt cotton;
- Improving the quality of C-4 cotton through better classification of seed cotton and lint;
- Establishing a West African regional training program for ginnerers;
- Supporting policy and institutional development for private management of the sector;
- Strengthening private cotton producer and support organizations in the C-4 countries;
- Improving access and reducing cost of high quality inputs (seeds, fertilizer, and agrochemicals); and
- Exploring ways for adding value to the West African cotton through processing and transformation within the region.

The meeting further recommended that national advisory committees should be established in each country in which they are not existent, to guide program implementation. At the regional level, the national advisory committees shall be coordinated by ECOWAS, under the framework of a regional advisory committee for operationalizing the Agriculture Policy of the Economic Community of West Africa. The program would work closely with other donors involved in the cotton sector, particularly the World Bank and the European Union.

Finally, the participants recommended the rapid implementation of the program which is expected to benefit millions of cotton produces and processors in the West Africa.